

What is claimed is:

1. A method comprising:

forming layers of digital video enhancement data to achieve bandwidth requirements for the respective layers.

2. The method of claim 1 wherein forming a layer of video enhancement data further comprises:

selecting a threshold value based upon the bandwidth requirements; and

generating a layer of video enhancement data based upon the threshold value.

3. The method of claim 2 further comprising:

transmitting the layer of video enhancement data over a digital communication channel; and

transmitting the threshold value over the digital communication channel.

4. An article comprising a computer-readable medium which stores computer-executable instructions for video data processing, the instructions causing a machine to:

form layers of digital video enhancement data to achieve bandwidth requirements for the respective layers.

5. The article of claim 4 wherein forming a layer of video enhancement data further comprises:

selecting a threshold value based upon the bandwidth requirements; and

generating a layer of video enhancement data based upon the threshold value.

6. The article of claim 5, the instructions further causing the machine to:

transmit the layer of video enhancement data over a digital communication channel; and

transmit the threshold value over the digital communication channel.

7. A method comprising:

processing layers of digital video enhancement data to enhance a base video signal, the layers having bandwidth requirements.

8. The method of claim 7 wherein the layers have approximately equal bandwidth requirements.

9. The method of claim 7 wherein the base video signal comprises a picture, and wherein each processed layer enhances the entire picture.

1 10. An article comprising a computer-readable medium which
2 stores computer-executable instructions for video data
3 processing, the instructions causing a machine to:

4 process layers of digital video enhancement data to
5 enhance a base video signal, the layers having bandwidth
6 requirements.

1 11. The article of claim 10 wherein the layers have
2 approximately equal bandwidth requirements.

1 12. The article of claim 10 wherein the base video signal
2 comprises a picture, and wherein each processed layer enhances
3 the entire picture.

1 13. A method comprising:

2 receiving a layer of digital video enhancement data that
3 achieves a bandwidth requirement, and

4 transmitting the layer over a digital communication
5 channel.

1 14. The method of claim 13, wherein the layer of digital
2 video enhancement data is a first layer of digital video
3 enhancement data that achieves a first bandwidth requirement,
4 the method further comprising:

5 receiving a second layer of digital video enhancement
6 data that achieves a second bandwidth requirement, wherein the
7 first bandwidth requirement is not equal to the second
8 bandwidth requirement, and

9 transmitting the second layer over the digital
10 communication channel.

1 15. The method of claim 13 further comprising:

2 receiving a threshold value corresponding to the layer,
3 wherein the layer comprises a '1' bit for each magnitude
4 greater than or equal to the threshold value; and

5 transmitting the threshold value over the digital
6 communication channel.

1 16. An article comprising a computer-readable medium which
2 stores computer-executable instructions for video data
3 processing, the instructions causing a machine to:

4 receive a layer of digital video enhancement data that
5 achieves a bandwidth requirement, and

6 transmit the layer over a digital communication channel.

1 17. The article of claim 16, wherein the layer of digital
2 video enhancement data is a first layer of digital video
3 enhancement data that achieves a first bandwidth requirement,
4 the instructions further causing a machine to:

5 receive a second layer of digital video enhancement data
6 that achieves a second bandwidth requirement, wherein the
7 first bandwidth requirement is not equal to the second
8 bandwidth requirement, and

9 transmit the second layer over the digital communication
10 channel.

1 18. The article of claim 16, the instructions further causing
2 a machine to:

3 receive a threshold value corresponding to the layer,
4 wherein the layer comprises a '1' bit for each magnitude
5 greater than or equal to the threshold value; and

6 transmit the threshold value over the digital
7 communication channel.

1 19. A method comprising:

2 generating from a source video sequence a digital base
3 video signal;

4 generating from the source video sequence a body of
5 digital video enhancement data; and

6 generating from the body of digital video enhancement
7 data a layer of digital video enhancement data, the layer
8 achieving a bandwidth requirement.

20. The method of claim 19, wherein the body of digital video enhancement data includes a plurality of magnitudes, and wherein generating a layer of digital video enhancement data comprises:

selecting a threshold value; and

forming a layer of digital video enhancement data comprising a '1' bit for each magnitude greater than or equal to the threshold value.

21. An article comprising a computer-readable medium which stores computer-executable instructions for video data processing, the instructions causing a machine to:

generate from a source video sequence a digital base video signal;

generate from the source video sequence a body of digital video enhancement data; and

generate from the body of digital video enhancement data a layer of digital video enhancement data, the layer achieving a bandwidth requirement.

22. The article method of claim 21, wherein the body of digital video enhancement data includes a plurality of magnitudes, and wherein generating a layer of digital video enhancement data comprises:

selecting a threshold value; and

forming a layer of digital video enhancement data comprising a '1' bit for each magnitude greater than or equal to the threshold value.

23. A method comprising:

receiving a digital base video signal comprising a set of values;

receiving a layer of digital video enhancement data comprising a set of bits, each bit corresponding to a value of the digital base video signal;

receiving a threshold value;

for each '1' bit in the layer of digital video enhancement data, combining the threshold value with the corresponding value of the digital base video signal.

24. The method of claim 23 further comprising:

receiving a sign bit corresponding to a bit in the layer of digital video enhancement data,

wherein combining the threshold value with the corresponding value of the digital base video signal comprises combining by adding when the sign bit indicates positive and combining by subtracting when the sign bit indicates negative.

1 25. An article comprising a computer-readable medium which
2 stores computer-executable instructions for video data
3 processing, the instructions causing a machine to:

4 receive a digital base video signal comprising a set of
5 values;

6 receive a layer of digital video enhancement data
7 comprising a set of bits, each bit corresponding to a value of
8 the digital base video signal;

9 receive a threshold value;

10 for each '1' bit in the layer of digital video
11 enhancement data, combine the threshold value with the
12 corresponding value of the digital base video signal.

1 26. The article of claim 25, the instructions further causing
2 the machine to:

3 receive a sign bit corresponding to a bit in the layer of
4 digital video enhancement data,

5 wherein combining the threshold value with the
6 corresponding value of the digital base video signal comprises
7 combining by adding when the sign bit indicates positive and
8 combining by subtracting when the sign bit indicates negative.

1 27. A system comprising
2 an encoder configured to:

generate from a source video sequence a digital base video signal;

generate from the source video sequence a body of digital video enhancement data; and

generate from the body of digital video enhancement data a layer of digital video enhancement data, the layer achieving a bandwidth requirement.

28. The system of claim 27, wherein the encoder is further configured to:

select a threshold value based upon the bandwidth requirement; and

generate a layer of digital video enhancement data based upon the threshold value.

29. A system comprising

a decoder configured to:

receive a digital base video signal comprising a set of values;

receive a layer of digital video enhancement data comprising a set of bits, each bit corresponding to a value of the digital base video signal;

receive a threshold value;

for each '1' bit in the layer of digital video
enhancement data, combine the threshold value with the
corresponding value of the digital base video signal.

30. The system of claim 29 wherein the combination generates
an enhanced viewable video signal.

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